KOSTRYUKOVA, K.Yu.; GURETSKAYA, F.S.

Amitosis in the embryo sack of the composite Heliopsis helianthoides Sweet. Izv.AN Arm.SSR.Biol.i sel'khoz.nauki 7 no.1:31-45 Ja '54. (MLRA 9:8)

1. Kafedra biologii Kiyevskogo meditsinskogo instituta, Ukrainskaya SSR, Kiyev.

(AMITOSIS) (BOTANY--EMBRYOLOGY)

KOSTYUKOVA, K. YU. Prof.; Guretskaya, F. S.

Krenke, Nikolai Petrovich, 1892-1939

Several observations on the "Theory of cyclic aging and rejuvenation of plants." by N. P. Krenke. Reviewed by Prof. K. YU. Kostyukova, F. S. Guretskaya. Sel. i sem. 19, no. 8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1953, Uncl.

KOSTRYUKOVA, K.Yu.

Comparative cytological investigation of pollen tubes in Lilium martagon on living and fixed material. Biul.Glav.bot.sada no.14:12-23 '52
(MLRA 6:5)

1. Kievskiy botanicheskiy sad imeni akademika Fomina.
(Fertilization of plants)

KOSTRYUKOVA, K.Yu.

O.B.Lepeshinskaia's works and the future development of the cellular theory. Bot.zhur.[Ukr.] 9 no.3:6-16 '52. (MLRA 6:11)

1. Kyyivs'kyy medychnyy ordena Trudovoho Chervonoho Prapora instytut im. akademyk Bogomol'tsya, Kafedra biologiyi.
(Lepeshinskaia, Ol'ga Borisovna, 1871-) (Cells)

KOSTRYUKOVA, K. Yu.

Angiosperms

Biological interpretation of the alternation of the generations of angiosperms, Zhur. ob. biol., 12, No. 5, 1951.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Uncl.

KOSTRYUKOVA, K.Yu.

Non-uniformity of spermatozoids, originating from a single pollen tube. Bot. zhur.[Ukr.] 8 no.3:16-30 '51. (MLRA 6:9)
(Fertilization of plants) (Spermatozoa)

KOSTRYUKOVA, K. YU.

"Futher contrubution on the sperdia of angiosperms." (p. 170)
by Kostryokova, ". Yu.

SO: Journal of General Biology (Zhurnal Obshchei Biologii) Vol. ., No. 3, 1949

KOSTRYUKOVA, K.Yu.

Practice of growing pollen tubes for cytological observations during the lifetime of plants. Nauk.zap.Kiev.un. 8 no.5:5-12 '49. (MLRA 9:10)

(Pollen) (Plant cells and tissues)

KOSTRYUKOVA, K.Yu., professor.

Pollen grains in amaryllidaceae. Nauk.zap.Kiev.un. 7 no.6: 5-18 '48. (MLRA 9:10)

(Amaryllis) (Pollen)

KOSTRYUKOVA, K. Yu.

"Biological Knowledge of the Growth of Pollen Grain" Agrobiol 2, 1948.

KOSTRYUKOVA, K. Yu.

"On the Pellicular Layer of the Cytoplasm of the Generative Cell of Convallaria Majalis L." Dok. AN 30, No. 5, 1941. Inst. Biology, Kiev State Univ.

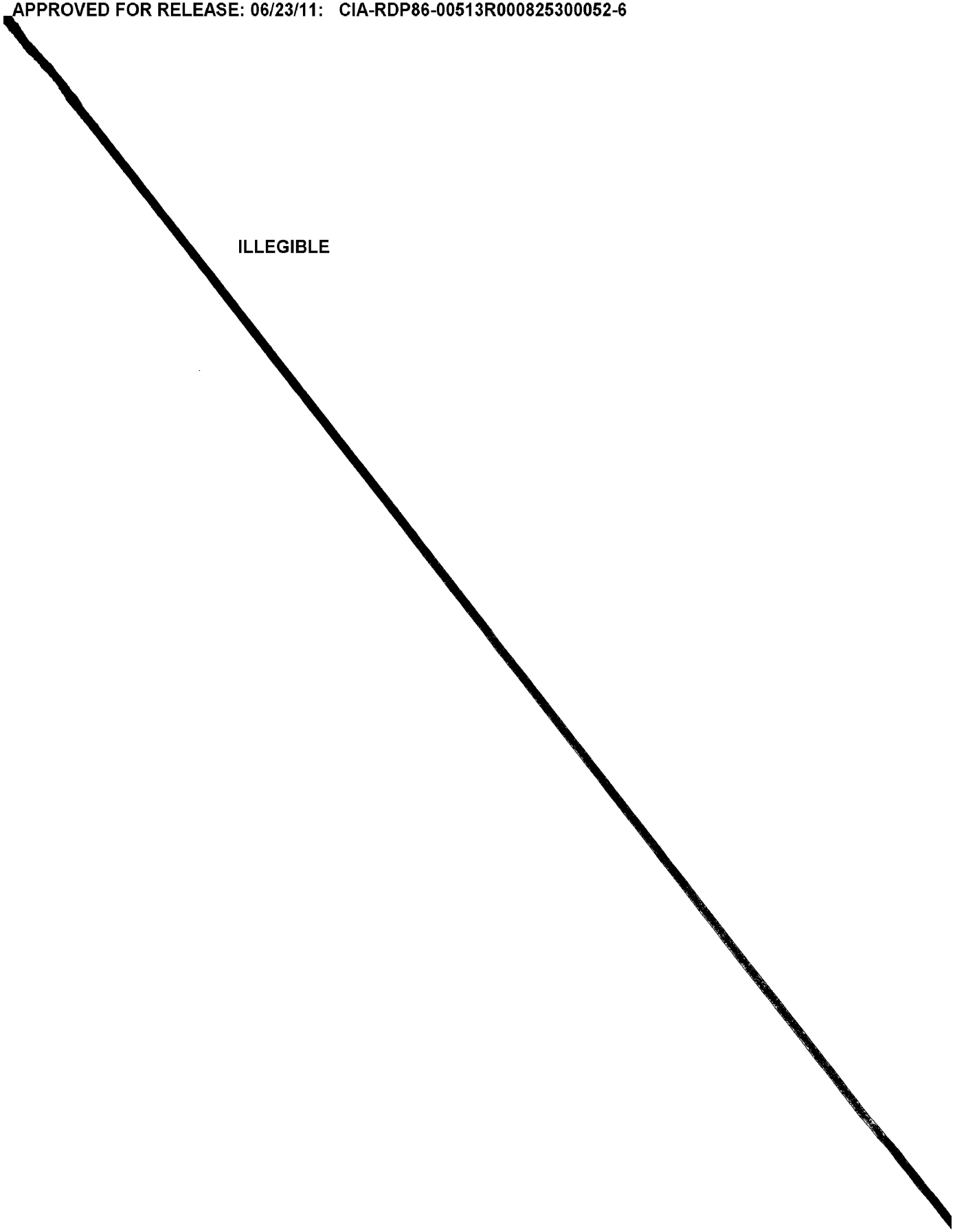
KOSTRYUKOVA, K. Yu.

"Observations in Vivo of the Formation of the Male Sex Cells in Lilium Martagon L." Dok AN 22, No. 7, 1939.

IPAT'YEV, V.V.; KOSTRYUKOVA, K.V.

Rate of oxidation of iron in hydrogen sulfide at high temperatures. Uch.zap.Len.un. no.175:71-79 '54.(MLRA 9:6)
(Iron) (Oxidation)

ILLEGIBLE



KOSTRYUKOVA, I.M., kand.med.nauk; KUSHNIRSKAYA, Ye.S., kand.med.nauk; IGONETS, Z.Ya., assistent

Placental presentation according to five-year data of obstetric institutions in Kalinin. Trudy IGMI no.10:61-63 '63.

1. Iz kafedry akusherstva i ginekologii (zav. kafedroy - prof. I.F.Pantsevich) Kalininskogo gosudarstvennogo meditsinskogo instituta.

KOSTRYUKOVA, I.M., kand.med.nauk

Dynamics of the opening of the cervix uteri in powerles
Trudy KG[illegible] no.10:295-297 '63.

Comparative evaluation of the methods for treating a pathological climacteric. Ibid.:298-301 (MIRA 18:1)

1. Iz kafedry akusherstva i ginekologii (zav. kafedroy - prof. I.F.Pantsevich) Kalininskogo gosudarstvennogo meditsinskogo instituta.

KOSTRYUKOVA, I.M., kand.med.nauk

Some data on the dynamics of dilatation of the cervix uteri and descent of the fetal head in normal labors. Akush.i gin. 35 no.5:34-38 S-O '59. (MIRA 13:2)

1. Iz akushersko-ginekologicheskoy kliniki (zaveduyushchiy kafedroy - prof. I.I. Feygel') Kalininskogo meditsinskogo instituta.
(LABOR, physiol.)

Kostryukova, I. M.

Name: KOSTRYUKOVA, I. M.

Dissertation: A comparative evaluation of methods of treating infestered abortion

Degree: Cand Med Sci

Degree of Publication

Affiliation: Second Moscow State Medical Inst imeni I. V. Stalin

Defense Date, Place: 1955, Moscow

Source: Knizhnaya Letopis', No 47, 1956

L 32894-66 EWT(m)/EWP(j)/T RM/WW

ACC NR: AR6023808 SOURCE CODE: UR/0081/66/000/001/M019/M019

AUTHOR: Vorob'yev, Yu. L.; Kostryukov, V. V.; Krymov, O. I.; Savina, G. G. 32

ORG: none 31

TITLE: Corrosion resistance of cements for reinforced concrete shipbuilding 14 6

SOURCE: Ref. zh Khimiya (pt. 2), Abs. 1M204

REF SOURCE: Tr. Khar'kovsk. in-ta inzh. zh. d. transp., 1965, vyp. 73, 65-72

TOPIC TAGS: reinforced concrete, cement, corrosion resistance/RVVBRB cement

ABSTRACT: The resistance of Sebryakovskii sulfate-resistant portland cement containing 77.3% $3CaO \cdot SiO_2$ and $2CaO \cdot SiO_2$ and 5.8% $3CaO \cdot Al_2O_3$ and the same cement containing 2% $CaCl_2$ and 2% $Al_2(SO_4)_3$ as additions was tested in sea water. The addns. helped expansion and rapid hardening of the concretes and mortars and led to filling of pores in the concrete (cement RVVBRB). The order of preparation, storage, and testing of the samples, and the characteristics of the corrosive liquids (synthetic Black Sea and Caspian Sea waters) are described in detail. The concentration of the solns. was 2 and 3 times the natural concentrations. The corrosion resistance was evaluated from the coefficient KC_8 which is equal to the ratio or R_{iz} of the test and control specimens at 8 months age. Cement RVVBRB had a high corrosion resistance

Card 1/2

0915 1525

KOSTRYUKOV, V. S.

"Vascularization and Innervation of the Periosteum Under Normal and Certain Pathological Conditions." Cand Med Sci, Khar'kov State Medical Inst, Khar'kov, 1953. (RZhBiol, No 5, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

ACC NR: AT7003880

presented. Orig. art. has: 1 figure, 2 formulas, and 2 tables.

SUB CODE: 20/ 07/ SUBM DATE: 20Aug66/ ORIG REF: 008/ OTH REF: 004

Card 2/2

ACC NR: AT7003990 (A) SOURCE CODE: UR/0000/66/000/000/0179/0182

AUTHOR: Mamedov, K. K.; Kerimov, I. G.; Kostryukov, V. N.; Guseynov, G. D.

ORG: none

TITLE: Specific heat and entropy of indium monoselenide at low temperatures

SOURCE: AN BSSR. Institut fiziki tverdogo tela i poluprovodnikov. Khimicheskaya svyaz' v poluprovodnikakh i termodinamika (Chemical bond in semiconductors and thermodynamics). Minsk, Nauka i tekhnika, 1966, 179-182

TOPIC TAGS: indium compound, selenide, specific heat, enthalpy, entropy, low temperature research, semiconducting material, chemical bonding

ABSTRACT: In view of lack of investigations on semiconducting compounds of the III - VI type, the authors measured the specific heat of indium selenide, which was shown by earlier experiments to have certain singularities in the structure and character of its chemical bonds. The temperature dependence of the specific heat was measured with an adiabatic calorimetric setup similar to that described earlier (P. G. Strelkov et al., ZhFKh v. 28, no. 3, 459, 1954). The preparation of the sample and the measurement procedure are described in some detail. The specific heats measured for 89 values of the temperature fell all (within one per cent) on a smooth curve, thus indicating the absence of phase transitions or anomalies in the specific heat of this compound in the investigated temperature range (50 - 300K). A table of the values of the entropy and enthalpy, obtained on the basis of the measurement results, is also

Card 1/2 UDC: 541.57

L 21139-66
ACC NR: AP6003783

transitions. The authors calculated the discontinuity by using different extrapolations of the specific-heat curve from the low-temperature and the high-temperature sides, and using a formula derivable from the theory of the molecular field. The results can be reconciled with the experimental data for all metals except nickel, where the error reaches 20%. The results are used to estimate the coefficients of the expansion of the thermodynamic potential. The authors thank A. S. Borovik-Romanov for useful discussions. Orig. art. has: 6 figures, 6 formulas, and 2 tables.
SUB CODE: 20/ SUBM DATE: 12Jul65/ ORIG REF: 008/ OTH REF: 004

Card 2/2 ULR

L 21139-66 EWT(l)/EWT(m)/EPF(n)-2/EWP(t)/ETC(m)-6 IJP(c) JD/WW

ACC NR: AP6003783 SOURCE CODE: UR/0181/66/008/001/0176/0180

AUTHORS: Kalinkina, I. N.; Kostryukov, V. N.

ORG: Institute of Crystallography AN SSSR, Moscow (Institut kristallografii AN SSSR)

TITLE: Jumps of specific heat in antiferromagnetic carbonates

SOURCE: Fizika tverdogo tela, v. 8, no. 1, 1966, 176-180

TOPIC TAGS: specific heat, carbonate, antiferromagnetic material, second order phase transition, transition metal, thermodynamic potential, nickel, iron, manganese, cobalt

ABSTRACT: The authors use earlier experimental results (ZhETF v. 41, 1694, 1961 and v. 43, 2028, 1962; ZhFKh v. 38, 780, 1964) on the carbonates of transition metals ($MnCO_3$, $NiCO_3$, $FeCO_3$, and $CoCO_3$) to calculate the discontinuities of the specific heat during the antiferromagnetic transition. The experimentally observed anomalies near the phase transition point do not agree quantitatively with the discontinuities that follow from the theory of second-order phase

Card 1/2

GUMBATOV, D.O.; KOSTRYUKOV, V.N. (Moskva)

Thermodynamic investigations at low temperatures. Heat capacity, entropy, enthalpy and the value of stopping potential of $C_6H_5S_1Cl_3$. Zhur. fiz. khim. 39 no. 1:116-122 Ja '65 (MIRA 19:1)

1. Submitted April 24, 1964.

KOSTRYUKOV, V.N.; GUMBATOV, D.O.

Evaluation of the potential retarding the internal rotation in molecules of some chlorosilanes based on the measurements of heat capacity at low temperatures. Zhur. fiz. khim. 39 no.8:2046-2049 Ag '65. (MIRA 18:9)

GUMBATOV, D.O.; KOSTRYUKOV, V.N.; SHAULOV, Yu.Kh.

Thermodynamic studies at low temperatures. Izv. AN Azerb. SSR. Ser. fiz.-tekh. i mat. nauk no.1:53-58 '65.

(MIRA 18:6)

KOSTRYUKOV, V.N.; KALINKINA, I.N.

Heat capacity and entropy of Mn, Fe, Co, and Ni carbonates at low temperatures. Zhur. fiz. khim. 38 no.3:780-781 Mr '64. (MIRA 17:7)

author thanks Academician P. L. Kapitsa for the possibility of making measurements at the temperature of liquid helium, and Professor P. G. Strelkov for his interest displayed in the work. There are 2 tables and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to English-language publication reads as follows: F. Rossini, D. D. Wagman, W. H. Evans, S. Levins, a. I. Jaffe, Selected values of chemical thermodynamic properties, Cir. 500 nat. Br. Standards U. S., 1952.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (All-Union Scientific Research Institute of Physical, Technical, and Radiotechnical Measurements)

SUBMITTED: November 26, 1959

Table 1. Specific heat of LiH (1 cal = 1.1640 absolute joule)
Legend: 1) c_p, cal/deg·mole.

Thermodynamic studies at low ...

T°, K	(1) C_p, кал/град·моль	T°, K	(1) C_p, кал/град·моль	T°, K	(2) C_p, кал/град·моль
3,72	0,0001	20,30	0,0137	125,61	2,325
4,28	0,00015	20,39	0,0131	137,92	2,733
4,89	0,0002	21,02	0,0147	140,00	2,805
6,98	0,0007	22,48	0,0153	155,90	3,271
8,20	0,0012	24,55	0,0200	158,64	3,352
9,82	0,0020	30,10	0,0405	178,51	3,923
10,85	0,0022	33,52	0,0495	181,71	4,005
11,03	0,0017	35,30	0,0683	203,89	4,577
11,42	0,0020	45,54	0,145	207,35	4,672
12,20	0,0027	47,22	0,103	208,08	4,687
12,90	0,0038	59,76	0,372	210,16	4,749
13,60	0,0059	61,53	0,408	217,83	4,955
13,71	0,0033	68,77	0,579	220,54	5,001
14,01	0,0057	80,17	0,900	228,32	5,207
14,53	0,0048	82,29	0,960	229,60	5,230
14,71	0,0062	90,14	1,214	236,42	5,415
15,33	0,0073	92,27	1,279	237,92	5,442
15,70	0,0076	99,83	1,523	245,03	5,586
16,65	0,0081	101,75	1,584	247,53	5,656
17,50	0,0097	111,25	1,896	260,97	5,939
18,17	0,0113	113,39	1,955	264,18	6,017
19,65	0,0113	123,17	2,277	292,65	6,579
				295,50	6,639

Card 4/4

was measured with a calibrated platinum resistance thermometer. Measurement below 12°K were made with the same calorimeter in a helium cryostat (Ye. S. Itskevich and P. G. Strelkov, Zh. eksperim. i teor. fiz., 32, 467, 1957). Temperature was measured by a carbon resistance thermometer which for every individual experiment was calibrated against the temperature of liquid helium and the triple point of hydrogen. These measurements were performed at the Institut fizicheskikh problem AN SSSR (Institute of Physical Problems, AS USSR). The data for the specific heat of LiH are given in Table 1. It was found that the Debye limiting law holds down to temperatures corresponding to $\sim 0.05\ \Theta_D$. Between 10-20°K, measurements of the specific heat are influenced by sorption of free H_2, which is formed by dissociation of LiH in the calorimeter at temperatures around room temperature. The entropy S_T of crystalline LiH at 298.15°K was found to be 4.79 ± 0.005 entropy units. For this temperature, it is further given: $H_T - H_0 = 902.81$ cal/deg·mole. The fact that his results for S_T and c_p do not agree with those obtained by F. Rossini et al. (see below) is explained by the author in that those scientists worked with unsufficiently pure substances, and that the determination of c_p were made inaccurately. The

26544

S/076/61/035/008/007/016
B101/B218

11.3500
11.1240

AUTHOR: Kostryukov, V. N. (Moscow)

TITLE: Thermodynamic studies at low temperatures. XI. The specific heat of lithium hydride between 3.7 and 295°K. Entropy and enthalpy at 298.15°K

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 8, 1961, 1759-1762

TEXT: The author attempts to render more precise the values of specific heat and entropy of LiH, hitherto only inaccurately determined, and to find out whether the Debye limiting law holds for this substance with simple cubic lattice but strongly differing atoms, as regards their size. LiH of a degree of purity of 99.8% was used; measurements above 12°K were made in nitrogen atmosphere by a method described already earlier (P. G. Strelkov, Ye. S. Itskevich, V. N. Kostryukov, G. G. Mirskaya, and B. N. Samoylov, Zh. fiz. khimii, 28, 459, 1954). The only difference with respect to the above paper consisted in the fact that a thin stainless-steel calorimeter (wall thickness 0.15 mm) was used. Its surface was covered with БФ-4 (BF-4) mass, and then the heater of constantan wire was wound around. The temperature

Card 1/4

SKLYANKIN, A.A.; STRELKOV, P.G.; KOSTRYUKOV, V.N.

Standard table of the heat capacity of benzoic acid at constant volume in the temperature range of 10 to 350 K. Izm.tekh. no.6: 24-26 Je '61. (MIRA 14:5)
(Benzoic acid--Thermal properties)

S/076/60/034/008/028/039/XX
B015/B063

Text to the tables: Table 1 - Specific Heat of Lead Monoxide (yellow modification) C_p cal/degree·mole (experimental values),

1 = C_p cal/degree·mole. Table 2 - Values of the Thermodynamic Functions for PbO (yellow modification) (1 calorie = 1.1840 absolute joules),

1 = C_p cal/degree·mole, 2 = $H_T - H_o$, cal/mole, 3 = S_T, cal/degree·mole,

4 = $H_T - H_o/T$, cal/degree·mole, 5 = $\Phi' = S - H_T - H_o/T$, cal/degree·mole.

Card 6/6

S/076/60/034/008/039/039/XX
B015/B063

Таблица 2

Значения термодинамических функций для PbO (желтая модификация)
(1 калория = 1,1840 абс. джоуля)

T,° K	C_p, кал/град·моль	$H_T - H_0$, кал/моль	S_T, кал/град·моль	$\frac{H_T - H_0}{T}$, кал/град·моль	$\Phi = S - \frac{H_T - H_0}{T}$, кал/град·моль
5	0,04*	0,04*	0,04	0,013	
10	0,28*	0,78	0,094	0,078	0,005
25	1,93	16,7	0,94	0,67	0,016
50	4,11	94,9	3,02	1,90	0,27
100	6,62	367,7	6,76	3,68	1,12
150	8,37	744,5	9,73	4,96	3,08
200	9,57	1195	12,32	5,98	4,77
250	10,38	1695	14,54	6,78	6,35
273,15	10,67	1939	15,47	7,10	7,76
293,15	10,88	2154	16,24	7,35	8,37
298,15	10,94	2208	16,42	7,41	8,89
300	10,95	2220	16,49	7,43	9,02
					9,06

* Экстраполированные значения

Card 5/6

S/076/60/034/008/028/039/XX
B015/B063

20,08	1,36	127,78	7,66	237,21	10,36
20,61	1,39	130,36	7,73	240,65	10,29
20,85	1,45	132,07	7,80	241,36	10,20
21,09	1,49	135,02	7,90	244,41	10,35
22,15	1,59	138,60	8,00	250,30	10,38
24,12	1,82	139,87	8,09	256,16	10,49
25,04	1,99	143,83	8,19	266,17	10,58
30,42	2,49	145,99	8,26	271,91	10,68
37,83	3,22	149,45	8,37	274,93	10,69
39,11	3,32	152,88	8,47	289,95	10,85
43,86	3,66	154,97	8,53	294,47	10,90
45,00	3,77	161,68	8,76	295,38	10,91
48,84	4,08	167,23	8,85	298,39	10,92
49,99	4,14	170,73	8,97	299,18	10,95
56,63	4,54	172,95	9,04	299,48	10,94
58,72	4,65	178,20	9,09	301,37	10,98
61,70	4,80	186,42	9,31	302,74	10,99
64,57	4,93	189,09	9,33		
71,03	5,28	193,05	9,43		

Card 4/6

S/076/60/034/008/028/039/XX
B015/B063

Теплоемкость окиси свинца (желтой модификации) C_p, $\frac{кал}{град \cdot моль}$ (экспериментальные значения)

T, °K	C_p $\frac{кал}{град \cdot моль}$	T, °K	C_p $\frac{кал}{град \cdot моль}$	T, °K	C_p $\frac{кал}{град \cdot моль}$
12,47	0,50	74,63	5,46	193,43	9,48
12,70	0,52	77,76	5,59	197,26	9,52
12,74	0,50	81,09	5,79	200,14	9,56
13,42	0,63	84,00	5,93	201,15	9,69
14,23	0,67	86,83	6,06	204,28	9,66
14,55	0,71	89,56	6,21	204,59	9,67
15,35	0,81	97,44	6,51	208,62	9,74
16,25	0,88	100,53	6,63	209,14	9,75
17,03	1,02	105,88	6,86	213,94	9,79
17,60	1,01	107,99	6,95	217,86	9,87
18,31	1,14	111,01	7,04	218,99	9,87
18,54	1,20	114,09	7,17	223,69	9,96
18,92	1,22	117,37	7,27	225,77	10,00
19,25	1,25	119,05	7,34	229,76	10,13
19,48	1,26	123,55	7,51	229,98	10,05
20,05	1,35	125,17	7,56	233,05	10,12

Card 3/6

Thermodynamic Studies at Low Temperatures. X. Specific Heat of the Yellow Modification of Lead Monoxide in the Temperature Range 12.5-303°K and Entropy at 298.15°K

S/076/60/034/008/029/039/XX
B015/B063

were determined from these data and from the integrated equations of the experimental curves $C_p(T)$ and C_p/T (T) (Table 2). This table shows that the standard entropy of yellow PbO is $S^\circ_{298.15^\circ K} = 16.42 \pm 0.05$ cal/mole·degree. A comparison between this value and published data indicates that the authors' value is very exact. Professor P. G. Strelkov is thanked for guidance and interest. There are 3 tables and 10 references: 2 Soviet, 4 US, 2 German, 1 British, and 1 Canadian.

ASSOCIATION: Institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (Institute of Physical, Technical, and Radiotechnical Measurements)

SUBMITTED: December 1, 1958

S/076/60/034/008/028/039/XX
B015/B063

AUTHORS: Kostryukov, V. N. and Morozova, G. Kh.

TITLE: Thermodynamic Studies at Low Temperatures. X. Specific Heat of the Yellow Modification of Lead Monoxide in the Temperature Range 12.5-303°K and Entropy at 298.15°K

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 8, pp. 1833 - 1836

TEXT: The specific heat of yellow PbO in the temperature interval 12-300°K has been determined by direct calorimetric measurements which were then used to determine entropy for 298.15°K since different values are mentioned in publications (Refs.2-6). The test method applied is described in Ref.7; samples with a particle size of 5 were used. 103 measurements were made in the above temperature interval. The specific heat of PbO is given in Table 1. Anomalies were not observed. Using V. V. Tarasov's formula for heterodynamic structures (Ref.10), the values of entropy and enthalpy for 12°K were extrapolated: $S_{12°K} - S_{0°K} = 0.15 \pm 0.02$ e.u.; $H_{12°K} - H_{0°K} = 1.61 \pm 0.2$ cal. The values of enthalpy and the ' potentials

05473

SOV/120-59-3-44/46

A Device for Keeping the Level of Liquid Nitrogen in a Dewar Constant

ASSOCIATION: Institut fizicheskikh problem AN SSSR
(Institute of Physical Problems, Academy of Sciences of the USSR)

SUBMITTED: February 20, 1958

Card 2/2

05473
SOV/120-59-3-44/46

AUTHORS: Bykov, V. P., and Kostryukov, V. N.

TITLE: A Device for Keeping the Level of Liquid Nitrogen in a Dewar Constant (Pribor dlya avtomaticheskogo podderzhaniya postoyannogo urovnya zhidkogo azota v dyuare)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 3 p 154 (USSR)

ABSTRACT: The device (Fig 1) consists of a metal siphon A, with an automatic siphon valve Б and a sealing head B, which is fixed to the liquid-nitrogen container. The valve allows the container to communicate with the atmosphere; the tube and siphon contain oxygen, and the tube serves to indicate the nitrogen level in the dewar. The oxygen evaporates and closes the valve if the nitrogen falls below the tip of the tube. The pressure in the container rises and forces the liquid over into the dewar until the tube is again cooled, when the valve quickly opens again. The rubber ring E ensures that the siphon is properly sealed to the container. The valve on the left is a safety valve. (Complete translation of all relevant matter). There is 1 figure.

Card 1/2

Thermodynamic Investigations at Low Temperatures. VII. 76-32-6-25/46
The Phase Transitions in Solid BF_3, CF_4 and SiF_4

which the authors were able to carry out by experimental determinations of the depression of additions. There are 6 figures, 1 table, and 7 references, 6 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskikh problem, Moskva (AS USSR, Moscow, Institute of Physical Problems)

SUBMITTED: February 18, 1957

1. Baron fluorides--Thermodynamic properties 2. Copper fluorides --Thermodynamic properties 3. Silicon fluorides--Thermodynamic properties 4. Metal fluorides--Temperature factors 5. Phase transitions

Card 3/3

experimental results obtained the authors concluded that the phase transition found by Schröder and Eucken is not characteristic for the BF_3-lattice but for the system BF_3-additions; the measurements of the thermal capacity from 12.6°K to the melting point did not show any corresponding anomalies in the case of BF_3; it therefore can be concluded that in solid BF_3 no phase transition takes place. The measurements with CF_4 showed the already observed phase transition which in the present paper is, however, regarded as one of second order. An anomalous drop of the thermal capacity prior to the melting point was not noticed. It is assumed that the phase transition in CF_4, that in SiF_6 and the $\alpha \rightleftarrows \beta$ transition in quartz belong to the type of second order. Investigations of SiF_4 showed that no phase transition takes place and that therefore the question whether crystal lattices consisting of similar tetrahedric molecules would react in a similar way must be answered in the negative. Then corrections of the triple points of BF_3, CF_4 and SiF_4 are mentioned

AUTHORS: Kostryukov, V. N., Samorukov, O. P., [illegible] 76-32-6-25/46
Strelkov, P. G.

TITLE: Thermodynamic Investigations at Low Temperatures (Termodinamicheskiye issledovaniya pri nizkikh temperaturakh) VII. The Phase Transitions in Solid BF_3, CF_4 and SiF_4 (VII. Fazovyye perekhody v tverdykh BF_3, CF_4 i SiF_4)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 6, pp. 1354 - 1361 (USSR)

ABSTRACT: The data by Eucken and Schröder (Ref 1) do not contain any clear explanation whether the observed transformation in the case of BF_3 is isothermal. Therefore the phase transformation can be interpreted incorrectly. For this reason the authors repeated the calorimetric investigations. They used an investigation method described already earlier, and used BF_3 preparations which had been produced by N.N.Mikhaylov at the Institute for Physical Problems, and the preparations BF_3-2 and CF_4 and SiF_4 obtained from the Institute of Applied Chemistry. From the

Card 1/3

A Pin Switch with a Compound Pin. 120-5-35/35

pin. The resistance of the insulation between the two parts of the pin is 10^7 Ω, the contact resistance being less than 10^{-4} Ω. The switch was found to be free from interference from thermal e.m.f.
There are 2 figures.

ASSOCIATION: All-Union Scientific Research Institute for Physico-technical and Radio-technical Measurements (Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy)

SUBMITTED: February 9, 1957.

AVAILABLE: Library of Congress

Card 2/2

Kostryukov, V.N.

AUTHORS: Kostryukov, V.N., and Samorukov, O.P. 120-5-35/35

TITLE: A Pin Switch with a Compound Pin (Shtyr'kovyy pereklyuchatel' so skleyennym shtyr'kom)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.5, p.126 (USSR).

ABSTRACT: A simple switch is described which can be used to connect a galvanometer across a thermocouple with or without a shunt, or to connect a critically damping resistance across the galvanometer. The switch has only one pin consisting of two electrically insulated parts. The pin (Fig.1) is prepared from red copper sheets glued together with the glue БФ-4. In the production of the pin, the thin layer of glue which serves as insulation may be bridged by copper. In order to prevent this, the blanks from which the pin is made are specially shaped plates, so that the seam (where the two parts are glued together) is not subjected to further treatment. The form of the plates from which the pin is made is shown in Fig.1. The switch itself consists of copper plates attached to an ebonite panel with sockets between them. The switching over is carried out by connecting corresponding plates by plugging in the pin into one of the three sockets (Fig.2). The plug is held in the sockets by means of grooves which hold a projection on the

ardl/2

USSR/Chemistry - Analysis methods

Card 1/1 Pub. 147 - 17/25

Authors : Kostryukov, V. N., and Strelkov, P. G.

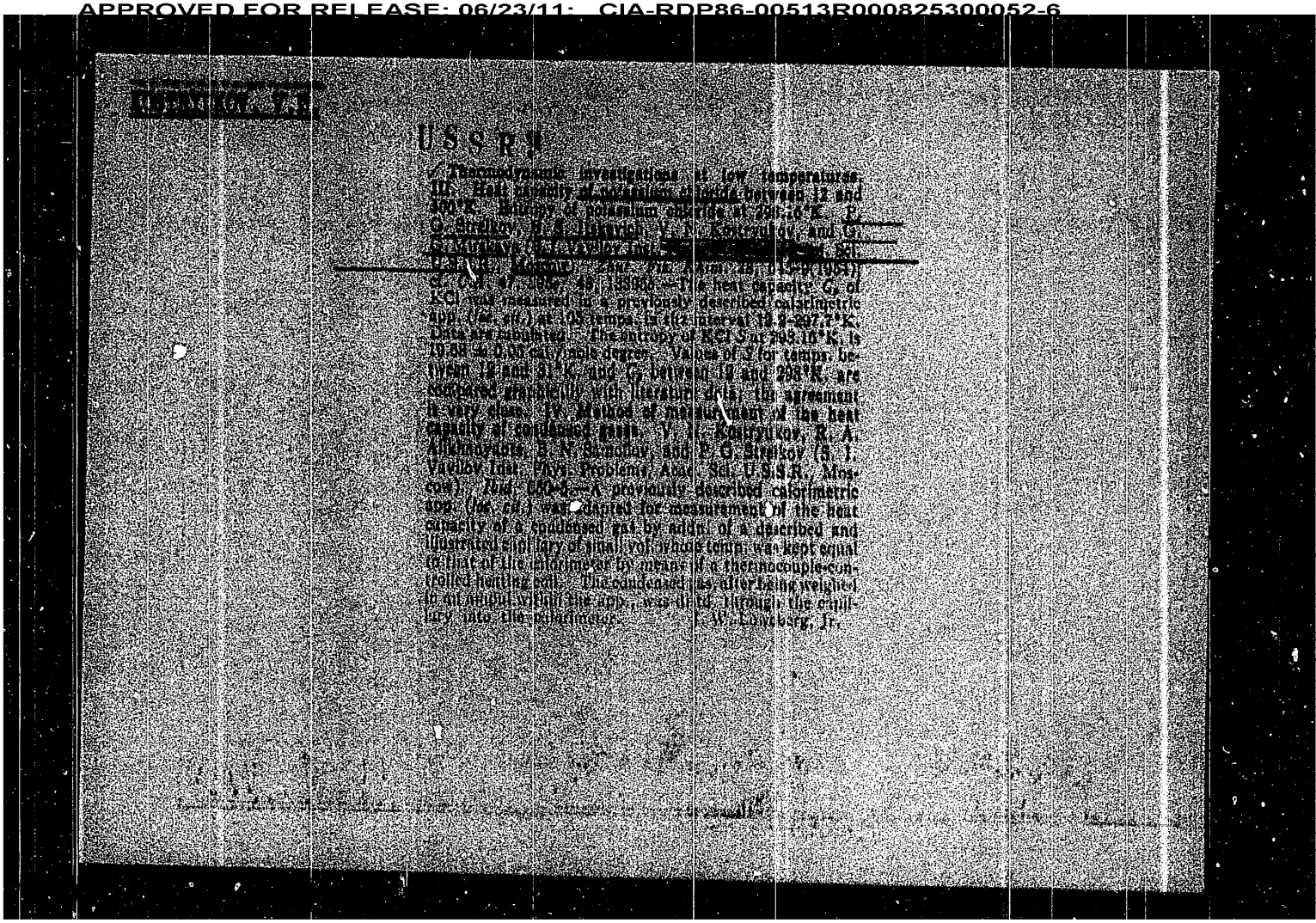
Title : Thermodynamic investigations at low temperatures. Part 5. Melting, pre-melting and pseudo-phase conversion of Hg.

Periodical : Zhur. fiz. khim. 28/10, 1825-1830, Oct 1954

Abstract : Calorimetric investigations, carried out close to the melting point, showed no anomalies in the specific heat of pure Hg in solid, liquid and supercooled states. The absence of measurable phenomena, caused by the existence of hetero-phase fluctuations in solid Hg, was established. Experimental pre-melting of solid Hg was brought about by the addition of Zn, Tl and Zn + Tl to the pure mercury. During Tl concentration in the mercury ranging from 0.02 to 0.1% the specific heat peak was observed at a melting point of the Tl Hg eutectics. Eleven references: 7-USSR; 3-USA and 1-English (1915-1954). Table; graphs; drawing.

Institution : Academy of Sciences USSR, The S. I. Vavilov Institute of Physical Problems

Submitted : March 13, 1954



KOSTRYUKOV, V. N.

USSR/Chemistry

Card 1/1

Authors : Strelkov, P. G., Tsikevich, E. S., Kostryukov, V. N., Mirskaya, G. G., and Samoylov, B. N.

Title : Thermodynamic investigations at low temperatures. Part 2.- Measurement of specific heat of solids and liquids between 12 and 300° K.

Periodical : Zhur. Fiz. Khim. 28, Ed. 3, 459-472, March 1954

Abstract : A vacuum calorimeter arrangement with screening shields was constructed which enables to measure at low temperatures the specific heat of substances which at room temperature are either in solid or liquid states. The vacuum housing of the calorimeter is sectional because of the sectional vacuum compressor functioning at low temperatures. The installation is equipped with all other auxiliary devices. Calibration is made on the empty calorimeter. The described arrangement enables to conduct measurements in a temperature range of from 12-300° K. Three references. Drawings, graphs.

Institution : Acad. of Sc. USSR, the S. I. Vavilov Institute of Physical Problems and the Moscow State Institute of Weights and Measures

Submitted : June 6, 1953

KOSTRYUKOV, V. N.

USSR/Chemistry - Potassium Salts

"Measurements of Specific Heat Between 12 and 300°K: Specific Heat and Entropy of Potassium Chloride," P. G. Strelkov, Ye. S. Itskevich, V. N. Kostryukov, and G. G. Mirskaya, Inst of Phys Prob imeni S. I. Vavilov Acad Sci USSR; Moscow State Inst of Measures and Measuring Instruments

"DAN SSSR" Vol [illegible]5, No 5, pp 10[illegible]5-10[illegible]

In a specially constructed apparatus, the specific heat and entropy of potassium chloride were measured. The results agree with those obtained by other workers. Submitted by Acad [illegible] 1 Jun 52

PA 2[illegible]T2[illegible]

KOSTRYUKOV, Valentin Andreyevich; NIKEMYAGI, D.K., red. izd-va; GOL'DBERG, T.M., tekhn. red.

[Collection of examples of calculations for heating and ventilation] Sbornik primerov rascheta po otopleniiu i ventiliatsii. Moskva, Gosstroiizdat. Pt.2.[Ventilation] Ventiliatsiia. 1962. 198 p. (MIRA 15:11)
(Ventilation)

KOSTYUKOV, Valentin Andreyevich

[Examples for calculating heating and ventilating systems] Primery rascheta po otopleniiu i ventiliatsii. 2., izd., perer. i dop. Moskva, Stroiizdat. Pt.1. [Heating] Otoplenie. 1964. 201 p. (MIRA 17:10)

ORLOV, A.I.; SHCHEGLOV, V.P., dotsent, kand.tekhn.nauk, retsenzent; KOSTRYUKOV, V.A., inzh., retsenzent; YEGIAZAROV, A.G., kand. tekhn.nauk, nauchnyy red.; SMIRNOVA, A.P., red.izd-va; RYAZANOV, P.Ye., tekhn.red.

[Heating and ventilation] Otoplenie i ventiliatsiia. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam. Pt.1. [Heating] Otoplenie. 1960. 223 p. (MIRA 13:9)
(Heating)

KOSTRYUKOV, Valentin Andreyevich; LIVCHAK, I.F., retsenzent; YEGIAZAROV, A.G., kand.tekhn.nauk, nauchnyy red.; NIKEMYAGI, D.K., red.izd-va; ALEKSANDROVA, O.M., tekhn.red.

[Examples of calculations of heating and ventilation systems] Sbornik primerov rascheta po otopleniiu i ventiliatsii. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam. Pt.1. [Heating] Otoplenie. 1960. 189 p. (MIRA 13:9)
(Heating)

KOSTRYUKOV, V.A., inzh.; KOPYLOV, L.I., inzh.; GOVOROV, V.P., inzh., nauchnyy red.; YEL'CHUKOV, V.S., red.; BERKUT, I.V., otvetsv. za vypusk

[Program for the subject "Production standards and estimates" in the technical school major "Sanitary installations in buildings," approved by the Ministry of Higher Education of the U.S.S.R., April 14, 1955. A 90-hour course] Programma predmeta "Tekhnicheskoe normirovanie i smety" k uchebnomu planu spetsial'nosti tekhnikumov "Sanitarno-tekhnicheskie ustroistva zdanii," utverzhdennomu Ministerstvom vysshego obrazovaniia SSSR, 14 aprelia 1955 g. Ob"em programmy - 90 chasov. Moskva, Uchebno-metodicheskii kabinet, 1958. 9 p. (MIRA 12:2)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Otdel uchebnykh zavedeniy upravleniya kadrov.
(Construction industry)

PROKOPCHUK, B.I., aspirant; KOSTYUKOV, M.S.; KOPOLEVA, N.M.

Preservation of pyrope depending on the conditions governing the transportation of loose sediments. Izv. vys. ucheb. zav.; geol. i razv. 7 no.5:58-63 My '64. (MIRA 18:3)

1. Vsesoyuznyy aerogeologicheskiy trest.

PROKOPCHUK, B.I.; IZRAILEV, L.M.; IL'IN, P.A.; LEONOV, B.N.; SUSOV, M.V.; KOSTRYUKOV, M.S.

Diamond potential of the Lena Valley; new diamond-bearing area in the northeastern part of the Siberian Platform. Trudy IAFAN AN SSSR Ser. geol. no.9:115-122 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300052-6

KARABANOV, A.I.; KOSTRYUKOV, K.S.

Compressorless unit for heating bitumen and bituminous mastics. Suggested by A.I.Karabanov, K.S.Kostriukov. Rats.i izobr.predl. v stroi. no.13:120-122 '59. (MIRA 13:6)

1. Stalingradskoye stroitel'no-montazhnoye upravleniye.
(Bitumen)

KOSTRYUKOV, K.I

USSR

Kostryukov, K. I. On an attempt to publish the works of Leonhard Euler. Ist.-Mat. Issled. 7, 639-640 (1954). (Russian)

I - F/W

ZHDANOV, M.M.; KOSTRYUKOV, G.V.; ASFANDIYAROV, Kh.A.; MAKSUTOV, R.A.; KONDAKOV, A.N.; TURUSOV, V.M.; SILIN, V.A.; PILYUTSKIY, O.V.; SHELDYBAYEV, B.F.; PETROV, A.A.; SMIRNOV, Yu.S.; KOLESNIKOV, A.Ye.; DROZDOV, I.P.; IVANTSOV, O.M.; TSYGANOV, B.Ya.; KORNONOGOV, A.P.; VDOVIN, K.I.; ALEKSEYEV, L.A.; GAYDUKOV, D.T.; LIPOVETSKIY, A.Ya.; DANYUSHEVSKIY, V.S.; VEDISHCHEV, I.A.; ALEKSEYEV, L.G.; KRASYUK, A.D.; IVANOV, G.A.

Author's communications. Neft. i gaz. prom. no.2:67-68 Ap-Je '64. (MIRA 17:9)

KOSTYUKOV, Gennadiy Vasil'yevich; GOLIKOV, Andrey Dmitriyevich; SAFRONOV, S.V., red.; SAVINA, Z.A., ved. red.; VORONOVA, V.V., tekhn. red.

[Temperature conditions of the Romashkino oil field] Temperaturnyi rezhim Romashkinskogo mestorozhdeniia. Moskva, Gostoptekhizdat, 1962. 96 p. (MIRA 15:3)
(Romashkino region--Oil reservoir engineering)

YERONIN, V.A.; KOSTRYUKOV, G.V.; LUK'YANOV, Ye.P.

Complete automation and telemechanization of Tatar oil fields.
Neft.khoz. 38 no.8:6-8 Ag '60. (MIRA 13:8)
(Tatar A.S.S.R.--Oil fields--Production method)
(Automatic control)
(Remote control)

GOREV, Yakov Yeliseyevich; KOSTRYUKOV, Aleksey Vasil'yevich; ROGINSKIY, S., otv.red.; ZAVERNYAYEVA, L., red.izd-va; TELEGINA, T., tekhn.red.

[Analysis of the financial plan for the construction industry] Analiz stroifinplana. Moskva, Gosfinizdat, 1959. 85 p. (MIRA 12:12)

(Construction industry--Finance)

KOMAROV, N.; KOSTRYUKOV, A.

Give chief attention to the chemical industry construction projects.
Fin.SSSR 38 no.2:22-25 F '64. (MIRA 17:2)

1. Upravlyayushchiy Saratovskoy kontoroy Stroybanka (for Komarov).
2. Nachal'nik planovo-ekonomicheskogo otdela Saratovskoy kontory Stroybanka (for Kostryukov).

KUSKOV, V.K.; KOSTRYKINA, A.G.

Preparation of alkylphenols by the rearrangement of alkylphenyl borates in the presence of ion exchange resins. Zhur.ob.khim. 31 no.9:3104-3106 S '61. (MIRA 14:9)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
(Phenols) (Boric acid)

ACC NR: AR6028070

channel, l - width of the ring channel, r - radius, α - angle between the absolute and tangential fluid velocities. Bibliography of 4 titles. S. Korzh
[Translation of abstract]

SUB CODE: 21

Card 2/2

ACC NR: AR6028070 (A,N) SOURCE CODE: UR/0124/66/000/005/B047/B047

AUTHOR: Kostrykin, V. F.

TITLE: Gas flow in the annular channel of a blade-less radial turbine impeller

SOURCE: Ref. zh. Mekhanika, Abs. 5B282

REF SOURCE: Tr. Tsentr. n.-i. in-ta morsk. flota, vyp. 62, 1965, 28-33

TOPIC TAGS: gas flow, turbine

ABSTRACT: To solve the problem of heat gradients in the spiral ducts and in the ring channel of a blade-less impeller, it is necessary to evaluate the losses in both elements. At the present time analytical methods are lacking, and the answer to this question can only be obtained experimentally. The expression for the coefficient of energy loss is derived in the form

$$\zeta_r = \frac{\dfrac{0.0406}{R^{0.2}\sin\alpha_0^{0.8}}\left(1-\bar{r}_1^{4}\right)^{0.8}\dfrac{r_1}{l_1}}{\left[1-\dfrac{0.033}{R^{0.2}\sin\alpha_0^{0.8}}\dfrac{r_1}{l_1}\left(1-\bar{r}_1^{4}\right)^{0.8}\right]^3\bar{r}_1^2}$$

where the indices 0 and 1 designate parameters at the inlet and outlet of the ring

Card 1/2

The use of gas turbines ...

of generators, or of pumps, is three times greater with gas-turbine drive. Loading pumps on tankers are usually steam-driven and particularly on diesel and gas-turbine tankers this requires large auxiliary boilers. Of course some boiler provision must be made for heating the cargo, for washing tanks and meeting general ship requirements during voyages, but the extra power required during loading operations is better provided by an independent drive from either a diesel or gas turbine. In tankers too, an inert gas atmosphere must sometimes be provided in fuel tanks; a gas turbine can serve this purpose and also provide compressed air for main engine starting and so on. Gas turbines for marine auxiliary use should be of the simple open-circuit type without regeneration. A range of sizes will be required between 45 and 1000 h.p., the majority up to 300 h.p. For gas turbines up to 500 h.p. radial turbines and centrifugal compressors give higher efficiencies than axial turbines and compressors. It is unlikely that gas turbines will be advantageous as the main drives of ship's generators except where a waste-heat boiler can be used. However, gas turbines may be very useful as peak load generators, particularly in passenger ships. There are 6 figures and 5 tables.

Card 2/2

S/229/63/000/001/001/004
E194/E455

AUTHORS: Rozenberg, G.Sh., Candidate of Technical Sciences, Kostrykin, V.F., Engineer, Kastal'skiy, S.A., Engineer, Sadadin, V.A., Engineer

TITLE: The use of gas turbines as marine auxiliaries

PERIODICAL: Sudostroyeniye, no.1, 1963, 24-29

TEXT: Gas turbines offer advantages as marine auxiliaries in cases where their light weight, simplicity of construction and reliability are of primary importance and their heavy fuel consumption is acceptable. This applies to the drive of emergency and peak generators and to fire pumps. If waste-heat boilers are used in conjunction with auxiliary gas-turbines, the fuel consumption may be less by a factor of 1.5 than that for a diesel generator with auxiliary boiler or a steam turbo-generator with main boiler. This method has been used on the American ship "Pioneer Moor". In hydrofoil vessels weight and space are at a premium but voyages are brief and refuelling is frequent. Under these circumstances, gas turbines could offer considerable advantages as auxiliaries. As compared with the usual diesel engines, and making due allowance for fuel consumption, the output

Card 1/2

KOSTRYKIN, V.F.

Gas flow in the annular duct of the bladeless guiding apparatus of a radial-flow turbine. Trudy TSNIIMF no. 62:28-33 '65.
(MIRA 18:12)

ACC NR: AR6022398

where the indices 0 and 1 designate the parameters at the annular channel inlet and outlet, χ is the width of the annular channel, r is the radius, and a is the angle between the absolute and peripheral directions of the velocity. 5 figures. Bibliography of 4 titles. [Translation of abstract]

SUB CODE: 13,10,20

Card 2/2

ACC NR: AR6022398 (N) SOURCE CODE: UR/0398/66/000/003/VC11/VC11

AUTHOR: Kostrykin, V. F.

TITLE: Gas flow in the annular channel of the bucketless guide in a radial turbine

SOURCE: Ref. zh. Vodnyy transport, Abs. 3V83

REF SOURCE: Tr. Tsentr. n.-i. in-ta morsk. flota, vyp. 62, 1965, 28-33

TOPIC TAGS: turbine, turbine design, heat balance, heat equation, heat measurement, engine component, heat loss, thermodynamic state equation, GAS FLOW

ABSTRACT: The solution to the problem of distribution of heat drops in the spiral duct and the annular channel of the bucketless guide requires an evaluation of losses in both elements. Calculation methods are lacking at this time. Only experiment can provide the solution to the problem. An equation for the dissipation factor is brought out:

$$\zeta_p = \frac{\frac{0{,}0406}{Re^{0.2}\sin\alpha_0^{0.8}}\left(1-\bar{r}_1^{-1}\right)^{0.8}\frac{r_1}{l_1}}{\left[1-\frac{0{,}033}{Re^{0.2}\sin\alpha_0^{0.8}}\cdot\frac{r_1}{l_1}\left(1-\bar{r}_1^{-1}\right)^{0.8}\right]^2\bar{r}_1^{-2}}$$

Card 1/2 UDC: 621.438:629.12

ROZENBERG, G.Sh., kand.tekhn.nauk; KOSTYUKIN, V.F.

Certain advantages in the use of straight symmetrical stator blades for radial axial-flow turbines. Trudy TSNIIMF 8 no.5:34-37 '63.
(MIRA 17:3)

KOSTRYKIN, Mikhail Iosifovich; LUKASHIN, Tikhon Alekseyevich; VAVILOV, Mikhail Andreyevich; MAKIYENKO, N.I., inzh., retsenzent; BOLOTIN, A.I., inzh., retsenzent; KITAYEV, V.Ye., inzh., retsenzent; KADOBNOV, V.F., inzh., retsenzent; BORZOV, K.V., inzh., retsenzent; ORLOV, M.P., inzh., otv. red.; KRASNYANSKIY, Ye.A., inzh., red.; SILINA, L.A., red.izd-va; SABITOV, A., tekhn. red.

[Metal work shop and electric equipment installation operations] Slesarnoe i elektromontazhnoe delo. Moskva, Gosgortekhizdat, 1963. 182 p. (MIRA 17:1)
(Electric wiring) (Metalwork)

ASHIKHMIN, A.K.; BUKANOV, M.A.; DLUGACH, B.A.; DOBROSEL'SKIY, K.M., inzhener; KOSTRYKIN, A.A.; LEBEDEVA, T.P., NIKITIN, V.D.; FARBEROV, Ya.D.; NIKITINA, V.D., professor, redaktor; GULEV, Ya.F., redaktor; VERINA, G.P., tekhnicheskiy redaktor

[Handbook for hump yard workers] Rukovodstvo rabotnikam sortirovochnoi gori. Moskva, Gos. transp. zhel-dor. izd-vo, 1950. 222p
[Microfilm] (MLRA 10:1)

1. Russia (1923- U.S.S.R.) Ministerstvo putey sobshcheniya (Railroads--Hump yards)

Study of the electric conductivity...

nesses. The shapes of the curves I = f(E) proved to be almost independent of the specimen thickness. Only in some 15 - 20μ specimens the curves became flatter near the break down voltage. The measurement of I = f(d) at constant E showed that I increased with increasing d. This phenomenon which was observed for the first time in solid dielectrics results from impact ionization. For NaCl the curves log I = f(d) deviate little from the linear form, for KCl they deviate strongly. This fact is ascribed to a volume charge that did not form due to ionization. It may be caused by high-voltage polarization or by the capture of electrons by lattice defects. This volume charge distorts the field and renders the dielectric inhomogeneous. Owing to this volume charge relation (3) is not fulfilled. The conductivity of the single-crystal films was by 7 - 8 orders of magnitude higher than that in ordinary single crystals of the same substance in weak fields. This also indicates impact ionization and ionic conductivity. The authors thank Professor Doctor A. A. Vorob'yev for advice. There are 3 figures and 8 references: 7 Soviet and 1 non-Soviet. The latter reads: F. Seitz. Phys Rev. 76, 9, 1376, 1949.

Card 2/3

S/181/61/003/009/019/039
B102/B104

AUTHORS: Vorob'yev, G. A., Kostrygin, V. A., and Kostrygina, N. P.

TITLE: Study of the electric conductivity of NaCl and KCl single crystals in a thin film

PERIODICAL: Fizika tverdogo tela, v. 3, no. 9, 1961, 2680 - 2682

TEXT: The authors studied the electric conductivity of some micron-thick NaCl and KCl single crystal films in a homogeneous electric field (10^6 v/cm). This study was made to experimentally verify the formula $\log i \simeq 0.3 \frac{d}{\lambda} + a$; i is the current passing through the dielectric, d the thickness of the film and λ the path of an electron between two ionization collisions (on the assumption of impact ionization of the dielectric). This formula is of interest since it permits a direct estimation of λ. The measurements were made with the aid of the arrangement schematically shown in Fig. 1. First, the specimen had maximum thickness (20μ). The current was measured by a highly sensitive mirror galvanometer. The specimen thickness was then reduced by 4 - 5μ and the current was again measured. Thus, the currents were measured in the same specimen with 3 - 4 different thick-

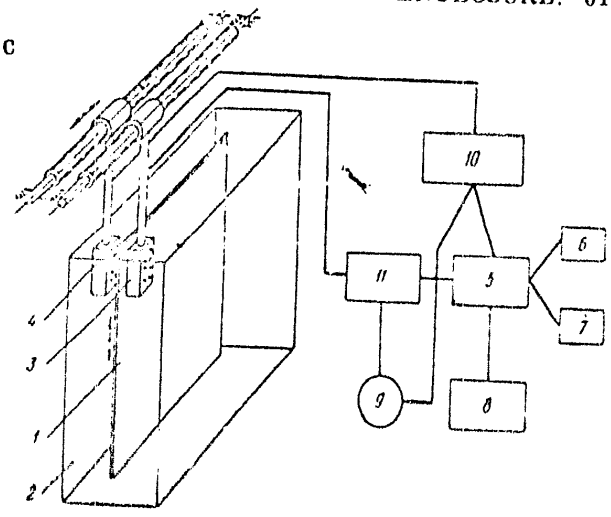
Card 1/3

ACCESSION NR: AT4013980

ENCLOSURE: 01

Fig. 1. Schematic illustration of ultrasonic inspection equipment.

1 — metal sheet under inspection
2 — test tank with water
3 — receiver
4 — transmitter (sound generator)
5 — defect recorder
6 — sonic signal
7 — light signal
8 — stopping device
9 — electron beam indicator for accurate locating of defect
10 — electric vibration generators
11 — amplifier



Card 4/4

ACCESSION NR: AT4013980

many factors, such as kind of defect, sheet thickness, surface condition, degree of flatness, and is 3.5-4 mm^2 in practice. At the present time, three UKL-2 installations are in operation at the "Krasny*y Vy*borzhets" plant in Leningrad. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 20Feb64	ENCL: 01
SUB CODE: MM	NO REF SOV: 001	OTHER: 000

Card 3/4

ACCESSION NR: AT4013980

are arrested, and the sheet is raised by the width covered by inspection during one passage. At the detection of a defect, a sonic signal 6, a light signal 7, and an automatic stopping device are triggered simultaneously. The approximate coordinates of the defect can be determined by taking readings on scales. For more accurate locating of the defect, a manual drive and an electron beam indicator 9 can be used. The drive mechanisms for the sheet and the transducers are mounted on the test tank structure. Adjustment is provided for different sizes of sheets to be inspected. All automation and electronic elements are unified in one cabinet, in the upper panel of which the controls are installed. The electric scheme of the installation is described, with some simplifications but in considerable detail. The receiver and transmitter each contain ten piezoelectric transducers, 10 mm in diameter and 1 mm thick. The frequency of ultrasonic vibrations is 2.8 megacycles/sec. The circular quartz plates are arranged in two vertical rows, overlapping 40%, permitting the inspection of a 50 mm wide strip during each horizontal path. The resolving capacity of the installation was determined by examining sheet specimens with artificial defects, represented by flat bottom drillings, not fully penetrating the sheet and closed by plugs of the same material. As a result of these tests, it has been established that the minimum size of a defect detectable by the apparatus is 2.5-3 mm^2. However, this size depends on

ACCESSION NR: AT4013980 S/3070/63/000/000/0098/0100

AUTHOR: Fedorov, Yu. N.; Serebryakov, A. G.; Kostry*gina, N. A.; Tsy*ro, O. I.; Shchukin, A. I.

TITLE: The semi-automatic ultrasonic apparatus UKL-2 for inspecting sheet metal for internal defects

SOURCE: Novy*ye mashiny* i pribory* dlya ispy*taniya metallov. Sbornik statey. Moscow, Metallurgizdat, 1963, 98-100

TOPIC TAGS: sheet metal inspection, ultrasonic inspection, piezoelectric transducer, metal defect, metal sheet

ABSTRACT: For detection of internal defects (laminations, non-metallic inclusions) in sheet metal, a semi-automatic immersed ultrasonic inspection device has been developed, in which several pairs of transmitting and receiving piezoelectric transducers are used. The transmitter 4 and receiver 3 are placed symmetrically on opposite sides of the test sheet 1. (See Fig. 1 of the Enclosure.) Water is used as the immersion liquid in the test tank 1. With the aid of power-driven threaded spindles, the transmitter and receiver can be moved horizontally back and forth along the inspected sheet with a speed of 6.8 m per minute. During this movement, the sheet is stationary. At the end of each passage, the transducers

Card 1/4

S/194/62/000/004/074/105
D299/D308

The UKL-2 automated ...

tor, and all receivers are connected to a common amplifier. In the presence of defects an automatic stop is operated, which interrupts the motion of the pickups. The minimum size of the defects that can be detected by the apparatus is 2.5 to 3 mm^2, depending on the state of the surface and on the warping of the sheet. The apparatus enables sheets of 1.5 - 15 mm thickness and 1.2 x 1.0 m^2 to be tested at a rate of 0.2 m^2/min. A diagram of the equipment and a pulse diagram are given. 6 figures. [Abstracter's note: Complete translation.]

Card 2/2

39626
S/194/62/000/004/074/105
D295/D308

19000

AUTHORS: Fedorov, Yu. N., Serebryakov, A. G. and Kostrygina, N. A.

TITLE: The UKL-2(UKL-2) automated ultrasonic equipment for testing for internal defects in a sheet

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 4, 1962, abstract 4-5-46g (V sb. Prom. primeneniye ul'trazvuka. Kuybyshevsk. aviats. in-t. Kuybyshev, 1961, 174-180)

TEXT: A description is given of an ultrasonic apparatus for the through testing of sheets by an immersion method using 10 pairs of probes, which enable a 50 mm wide strip to be verified. The pick-ups accomplish a reciprocating motion, moving horizontally within the extreme positions, after which the sheet, fixed vertically, is raised by a height equal to the strip scanned by the pickups. The process is carried out automatically until the whole sheet has been checked. Each radiating probe is connected to its own genera-

Card 1/2 See S 194-62 000-004-073-105

S/137/62/000/004/066/201
A052/A101

1,2000

AUTHORS: Fedorov, Yu. N., Serebryakov, A. G., Kostrygina, N. A.

TITLE: YKJ-2 (UKL-2) automated ultrasonic unit for internal flaw detection in sheets

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 4, 1962, 26, abstract 4D148 (V sb. "Prom. primeneniye ul'trazvuka. Kuybyshevsk. aviats. in-t". Kuybyshev, 1961, 174-180)

TEXT: The method and installation for automatic internal flaw detection (laminations, non-metal impurities etc.) in rolled sheets are described. The described equipment is based on the shadow pulse immersion ultrasonic method. UKL-2 unit is described, and the general design scheme with the block diagram are presented. The unit is used in the industry and has the following characteristics: the tested sheet size = 1.5 - 15 x 1,000 - 1,500 mm; the admissible curvature of the test sheet is up to 10 mm, the maximum weight of the test sheet = 200 kg. The speed of control is 0.2 m/min and the maximum area of the detected flaw is 25 mm^2.

A. Leont'yev

[Abstracter's note: Complete translation]

Card 1/1

L 18217-65

ACCESSION NR: AT5001226

ENCLOSURE: 01

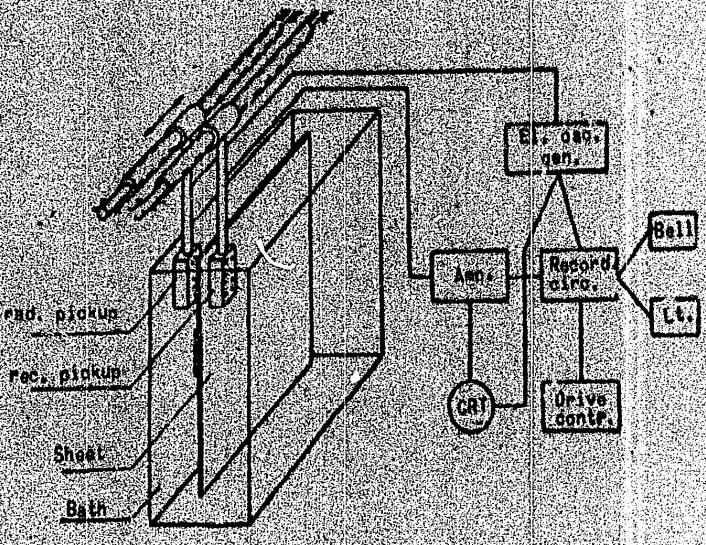


Fig. 1. Diagram of method

Card 3/3

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ACCESSION NR: AT5001226

sonic signals are produced and the scanning is stopped automatically. The approximate coordinates of the fault are read on scales, and a more accurate determination is made manually with the aid of a cathode ray tube indicator. The electronic circuitry, the actuating mechanisms, and the pickups are described briefly. The equipment can handle sheets 1.5--15 mm thick, up to 200 mm long and up to 1000 mm wide, with maximum sheet curvature 10 mm. The maximum sheet weight is 200 kg. The scanning rate is 0.2 m^2/min, and the minimum defect size is 2.5 mm^2. Orig. art. has: 6 figures.

ASSOCIATION: None

SUBMITTED: 11May61 ENCL: 01

SUB CODE: GP, IE NR REF SOV: 000 OTHER: 000

Card 2/3

L 18217-65 EWT(d)/EWT(l)/EWP(c)/EWP(v)/T/EWP(k)/EWP(l) Pf-4/Pl-4 ASD(p)-3
ACCESSION NR: AT5001226 MLK S/0000/61/000/000/0174/0180

AUTHOR: Fedorov, Yu. N.; Serebryakov, A. G.; Kostrygina, N. A. B

TITLE: UKL-2 automatic ultrasonic installation for the monitoring of internal defects in a sheet

SOURCE: Vsesoyuznaya mezhvuzovskaya konferentsiya po promyshlennym primeneniyu ul'trazvuka. Kuyby*shev, 1960. Promyshlennoye primeneniye ul'trazvuka (Industrial application of ultrasound); trudy konferentsii. Kuyby*shev, 1961, 174-180

TOPIC TAGS: ultrasonic defectoscopy, sheet material, internal defect/UKL-2

ABSTRACT: The UKL-2 apparatus was developed to detect automatically flake formations or external inclusions in sheet metal, and is based on an ultrasonic shadow-type immersion method using several pairs of transmitting and receiving piezo-pickups. A block diagram of the method is shown in Fig. 1 of the Enclosure. Water is used to couple the tested sheet acoustically with the transmitter and receiver pickups, which move over the stationary sheet in a horizontal direction, scanning a strip 50 mm wide. After each passage of the pickups, the sheet is raised 50 mm and the next strip is scanned. Upon detection of a fault, light and

Card 1/3

L 43154-66
ACC NR: AR6010515

3 illustrations and bibliography of 11 titles. [Tomsk Polytechnic Institute im. S. M. Kirov (Tomskiy politekhnich. in-t)] A. Petrashko

SUB CODE: 11, 09

Card 2/2 MLP

L 43154-66 EWP(l)/EWP(m)/EWP(l) [illegible]

ACC NR: AR6010515 | SOURCE CODE: UR/0198/65/000/010/B012/B013

AUTHOR: Kostrygin, V. A.

TITLE: Investigation of the electrical breakdown of films of organic glass and celluloid

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 10B64

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 174-176

TOPIC TAGS: organic glass, cellulose plastic, dielectric breakdown, impact ionization, thin film

ABSTRACT: An experimental investigation was performed on the dc- and pulsed-voltage breakdown (rectangular pulses with a front duration of $\sim 5 \cdot 10^{-8}$ sec and excess voltages of 7.5--10%) of an organic glass $(5-16) \cdot 10^{-4}$ cm thick and celluloid $(6-30) \cdot 10^{-4}$ cm thick. The effect of the strengthening and increased time to breakdown at small thicknesses of dielectrics of amorphous and crystalline structure indicates the presence of impact ionization during breakdown. Emphasis is placed on the importance of studying the question of the strengthening of thin films for the development of microminiature devices, in particular film capacitors which have high electrical strength in addition to high capacitance. [Translation of abstract]

Card 1/2 UDC: 621.315.616.96.015.51

VOROB'YEV, A. A., doktor fiziko-matematicheskikh nauk, prof. ; VOROB'YEV, G. A. , kand. tekhn. nauk; KOSTYUYGIN, V. A., kand. tekhn. nauk

Dependence of the electrical strength of solid dielectrics on the thickness of the breakdown layer. Izv. vys. ucheb. zav.; energ. 7 no.5:108-110 My '64. (MIRA 17:7)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni Kirova. Predstavlena kafedroy tekhniki vysokikh napryazheniy.

ACCESSION NR: AP4034951

dielectric strength. The effect of annealing the crystals was also investigated. The dielectric strengths of alkali-halide monocrystals of the potassium series were measured with both unannealed and annealed crystals. It was found that the dielectric strength of the unannealed crystal was always larger than that of the annealed crystal. The difference between the two values increased with decreasing lattice energy, ranging from about 10% for KCl to about 40% for KI. It was also noted that the dispersion of experimental values was significantly less for the annealed crystals. Thus, mechanical stresses and dislocations in the unannealed crystal play an essential role in scattering electrons, increasing the dielectric strength. Orig. art. has: 1 diagram and 2 tables.

ASSOCIATION: Tomskiy politekhnicheskiy institute im. S. M. Kirova (Tomsk Polytechnic Institute)

SUBMITTED: 13Aug63 DATE ACQ: 20May64 ENCL: 00

SUB CODE: SS NO REF SOV: 006 OTHER: 005

Card 2/2

ACCESSION NR: AP4034951 S/0181/64/006/005/1560/1562

AUTHORS: Vorob'yev, A. A.; Vorob'yev, G. A.; Konchorbayov, T. K.; Kostry*gin, V. A.; Nekrasova, L. G.

TITLE: Influence of the electrodes and the structure of dielectric crystals on their dielectric strength

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1560-1562

TOPIC TAGS: alkali halide, dielectric material, dielectric strength, annealing, potassium compound

ABSTRACT: The dielectric strength of a number of alkali-halide crystals was measured by using several types of electrodes. Use of metallic electrodes produced nearly equal values which were about 45% lower than the values obtained using a saturated NaCl solution as the electrodes. Further investigation using combinations of liquid and graphite electrodes showed that, regardless of the anode material, the value of the dielectric strength was much lower with graphite as the cathode than when the electrolyte was the cathode. It is concluded that cold emission from the cathode has a significant effect on the value of the

Card 1/2

VOROB'YEV, A.A.; VOROB'YEV, G.A.; KOSTRYGIN, V.A.

Estimation of the impact ionization coefficient in crystals. Izv.vys. ucheb.zav.;fiz.no.2:174-175 '63.

(MIRA 16:5)

1. Tomskiy politekhnicheskiy institut imeni Kirova.
(Ionization) (Breakdown, Electric)

ACCESSION NR: AT4016320

were fastened between two plates of plastic constituting the conductor and provided with metallic NaC -immersed electrodes allowing the finest interspace control. The breakdown was effected with 5 x 10^{-8}sec rectangular pulses and recorded by a high voltage electron oscillograph. It was found that the smaller the layer thickness of the same monocrystal and the lower the lattice energy of different monocrystals, the greater the magnitude of the discharge lag and the electric strength. The 10 μ thick NaCl monocrystals showed a drop in electric strength after exposure to ultraviolet radiation. The established existence of electric strengthening and greater discharge lag during dielectric breakdown is believed to confirm the existence of impact ionization. "In conclusion, the author thanks Prof. Dr. A. A. Vorob'yev and Cand. Tech. Sc. G. A. Vorob'yev for their attention and help." Orig. art. has: 3 figures and 1 formula.

ASSOCIATION: NII at the TPI, Tomsk

SUBMITTED: 00 DATE ACQ: 06Mar64 ENCL: 00

SUB CODE: NP, IC NO REF SOV: 003 OTHER: 001

Card 2/2

ACCESSION NR: AT4016320 S/0000/62/000/000/0365/0369

AUTHOR: Kostry*gin, V. A.

TITLE: Investigation of electrical breakdown through thin layers of alkali halide monocrystals

SOURCE: Vses. soveshch. po fiz. shchelochnogaloidn. kristallov. 2d, Riga, 1961. Trudy*. Fiz. shchelochnogaloidn. kristallov(Physics of alkali halide crystals). Riga, 1962, 365-369

TOPIC TAGS: alkali halide, alkali halide crystal, electrical breakdown, dielectric, alkali halide electrical breakdown, electric strength, crystal electric strength, impact ionization, alkali halide ionization, discharge, discharge delay

ABSTRACT: As evidence of the occurrence of impact ionization during a solid dielectric-breakdown, the author undertook to establish the occurrence of electric strengthening and an increased discharge lag in thin dielectric layers. In an improved procedure, using a microscope, errors due to the lack of structural uniformity of the prepared layers, large electrode dimensions and inaccuracies in layer thickness measurement were eliminated. The 1 x 1 x 0.5 cm, NaCl-, KCl-, KBr- and KI-monocrystal specimens

Card 1/2

VOROB'YEV, A.A. (Tomsk); VOROB'YEV, G.A. (Tomsk); KOSTRYGIN, V.A. (Tomsk)

Concerning the mechanism of the breakdown of a thin layer of solid dielectrics. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.4:66-68 Jl-Ag '62. (MIRA 15:8)
(Dielectrics)

S/181/62/004/003/038/045
B108/B104

AUTHORS: Vorob'yev, G. A., and Kostrygin, V. A.

TITLE: Effect of irradiation on the electrical stability of rock salt to spark-over in a thin layer

PERIODICAL: Fizika tverdogo tela, v. 4, no. 3, 1962, 811-812

TEXT: In order to establish if the spark-over in thin rock salt layers is due to the accumulation of positive space charge at the anode the authors made experiments with ultraviolet light. Irradiation should liberate photoelectrons and electrons from microdefects. The experiments showed, however, that in uncolored crystals electrons were released mainly by cold emission from the cathode. There are 2 figures and 2 Soviet references.

ASSOCIATION: Tomskiy politekhnicheskiy institut im. S. M. Kirova (Tomsk Polytechnic Institute imeni S. M. Kirov)

SUBMITTED: December 1, 1961

Card 1/1

L 19666-63

ACCESSION NR: AR3006988

to a decrease in E_{br} of the crystal NaCl with d = 10μ, this being attributed to the multi-avalanche-streamer mechanism of breakdown of solid dielectrics. N. Torbin.

DATE ACQ: 06Sep63 SUB CODE: PH ENCL: 00

Card 3/3

sec and an overvoltage 5--10%. On the basis of the data obtained, $t_{del} = f(d)$ and $E_{br} = f(d)$, it is established that the discharge delay time t_{del} increases with decreasing thickness up to 10^{-5}--10^{-6} sec, whereas for d = 0.1 mm we have $t_{del} = 10^{-7}$ sec. For different values of d, t_{del} is larger for crystals with smaller lattice energy. When d decreases, an increase in E_{br} is observed for all salts (for NaCl up to 8 mV/cm), and t_{del} increases, this being attributed to processes of impact ionization by electrons. In the case of thin layers, for a discharge to develop it is necessary that several electron avalanches pass through, and the discharge has a multi-avalanche-streamer character. When d is on the order of several tenths of a millimeter, the discharge has an avalanche-streamer character. Irradiation of the cathode with ultraviolet light leads